

CLAIMS

5 1 - Process for the manufacture of a concentrated solution by distillation and evaporation of a dilute solution, in which the distillation and the evaporation are carried out in a distillation column and an evaporator which constitute two distinct pieces of equipment which are easy to dismantle and to transport.

2 - Process according to claim 1, in which the solution leaving the bottom of the distillation column is transferred to the evaporator through a distributor which has a cross-sectional area at its narrowest point which is smaller than the cross-sectional area of the distillation column.

10 3 - Process according to claim 1, in which the evaporator is a falling film evaporator.

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4 - Process according to claim 3, comprising the following steps:
15 (a) feeding the diluted solution at one or more points along the distillation column;
(b) distilling the diluted solution in the distillation column so as to obtain a low boiling vapour fraction of the solution at the top of the distillation column and a high boiling liquid fraction of the solution at the bottom of the distillation column;
20 (c) transferring, through the distributor, the high boiling liquid fraction of the solution from the bottom of the distillation column into the falling film evaporator;
(d) concentrating the high boiling liquid fraction of the solution in the falling film evaporator; and
25 (e) collecting the concentrated solution at the bottom of the falling film evaporator.

5 - Process according to claim 1, using no recirculation of liquid.

6 - Process according to claim 1, wherein the distillation is carried out under a maximum pressure of 10 Torr.

30 7 - Process according to claim 4, wherein in step (d), circulation of hot water is used as heating medium and in that the hot water, the high boiling liquid fraction of the solution and the vapour arising from it are flowing down

concurrently.

8 - Process according to claim 4, wherein after the step (e), the concentrated solution leaving the falling film evaporator is transferred through a distributor into a cooler where it is cooled.

- 5 9 - Process according to claim 1, wherein the concentrated solution is a concentrated aqueous hydrogen peroxide solution.

10 - Process according to claim 9, wherein the concentrated aqueous hydrogen peroxide solution leaving the falling film evaporator contains at least 90% w/w hydrogen peroxide.

- 10 11 - Concentrated aqueous hydrogen peroxide solutions obtainable by the process according to claim 10.